

REMARKS

Applicant respectfully requests that the foregoing amendments be made prior to examination of the application. The amendments cancel claims 1-38 and add claims 39-81. A detailed listing of the claims with appropriate status identifiers is set forth above. With the amendments set forth above, claims 39-81 will be pending in the application, and are presented for examination.

Applicant notes that these claims are directed to subject that was not allowed in the parent application 09/933,170.

Claims directed to subject matter claimed in instant claims 39-60 were rejected as being unpatentable over Claesson et al. (WO 97/26908) (“Claesson”). Applicant believes that these claims are patentable over Claesson for at least the following reasons.

Claesson discloses a method of treating *Helicobacter pylori* infection that involves the administration of a three-component antibacterial system comprising (1) lactoperoxidase, (2) a thiocyanate, and (3) a peroxide donor. Claesson also discloses that its three-component antibacterial system is useful for inhibiting the growth of *Helicobacter pylori*.

Independent claims 39 and 52 recite methods that consist essentially of administering a food, wherein the food comprises one or more of a glucosinolate, an isothiocyanate, a derivative of a glucosinolate, or a derivative of an isothiocyanate. There is no teaching or suggestion in Claesson of such methods because Claesson requires the administration of three components: (1) a lactoperoxidase, (2) a thiocyanate, and (3) a peroxide donor. Claesson does not teach or suggest a method of treating *Helicobacter* infection or of inhibiting *Helicobacter* growth by administering fewer than all of the three components of its antibacterial system. In fact, Claesson teaches away from the present invention by teaching that it is the combination of its three components that is effective in treating *Helicobacter* infection. For example, page 7, lines 14-16, of Claesson states that “the active component

which is formed by the [three-component] system” has the relevant activity.¹ Moreover, Table 1 of Claesson reports that when the thiocyanate component alone was tested *in vitro*, it was not observed to be effective against *Helicobacter pylori* bacteria. See Claesson, page 6, Table 1, Flask 2.

In contrast, applicant has discovered that the administration of a food comprising a glucosinolate, an isothiocyanate, a derivative of a glucosinolate, or a derivative of an isothiocyanate is effective in treating *Helicobacter* infection and inhibiting *Helicobacter* growth, and that other compounds, such as, for example, the lactoperoxidase required in Claesson’s system, are not necessary. See, e.g., Examples 1 and 2 at pages 23-27 of the instant specification, which demonstrate that sulforaphane alone inhibits growth of *H. pylori*.

The Examiner of parent application 09/933,170 also did not allow claims directed to the subject matter of instant claims 61-81, although no formal rejection of claims directed to that subject matter was made. With regard to Claesson, applicant notes that the thiocyanate of Claesson is different from the glucosinolates, isothiocyanates and derivatives of isothiocyanates recited in instant claims 61-81. Thus, the teachings in Claesson related to the administration of a composition comprising a thiocyanate do not teach or suggest the administration of a composition comprising one or more of a glucosinolate, an isothiocyanate, or a derivative of an isothiocyanate, as recited in instant claims 61-81.

In view of the forgoing, Applicant believes that the application is in condition for allowance, and an early notice to that effect is respectfully requested.

¹ It has been reported that the antibacterial effect of the lactoperoxidase/thiocyanate/peroxide system is attributable to hypothiocyanate and several higher oxyacids of thiocyanate that are generated during the lactoperoxidase-catalyzed oxidation of thiocyanate, including cyanosulfurous acid, and cyanosulfuric acid. See, e.g., Xiangqun Gao, Doctoral Thesis, Swedish University of Agricultural Sciences, Uppsala, Acta Universitatis Agriculturae Sueciae, Agraria 116 (1998).

Should there be any questions regarding this paper, or should any issues remain, the Examiner is invited to contact the undersigned by telephone in order to advance prosecution of the application.

Respectfully submitted,

Date March 31, 2004

By Courtenay C. Brinckerhoff

FOLEY & LARDNER

Customer Number: 22428

Telephone: (202) 672-5483

Facsimile: (202) 672-5399

Courtenay C. Brinckerhoff
Attorney for Applicant
Registration No. 37,288